

REMARKS

The Office Action mailed June 18, 2009, and the Advisory Action mailed September 17, 2009, have been reviewed and these remarks are responsive thereto. No new matter has been added. Claims 1-16 remain pending. Reconsideration and allowance of the instant application are respectfully requested.

Claims Rejected Under 35 USC § 103

Claims 1-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. pat. no. 5,884,024 to Lim et al. ("Lim") in view of U.S. pat. no. 6,073,178 to Wong et al. ("Wong"). This rejection is respectfully traversed for at least the following reasons.

Amended claim 1 recites "a method for controlling a DHCP relay in a broadcast access device to implement control and management of interaction between a DHCP client and a DHCP server, comprising: modifying, at the broadcast access device, one or more protocol fields in at least one DHCP message communicated between a DHCP relay, the DHCP client and the DHCP server during an initiation phase of the DHCP interaction at an Application Layer of TCP/IP protocol, so that the at least one DHCP message communicated between the DHCP client and the DHCP server can pass through the DHCP relay located in the Application Layer, wherein modifying the one or more protocol fields includes: upon receiving a DHCP message for request sent from the DHCP client to the DHCP server, filling in at least one field associated with the DHCP relay in the DHCP message for request, and upon receiving a DHCP message for response sent from the DHCP server to the DHCP client, replacing at least one server parameter of a field associated with the DHCP server in the DHCP message for response with at least one relay parameter of the DHCP relay." The amended features recited in claim 1 are supported by the filed specification when read as a whole, and for example, page 2, lines 8-13. Accordingly, no new matter has been added.

Neither Lim nor Wong, either separately or in combination, teaches or suggests such features.

Firstly, claim 1 recites features related to the DHCP relay filling in **fields associated with the DHCP relay** in the DHCP message for request. Although Lim at col. 6, lines 12-26 discloses that since DHCP broadcast messages are processed by DHCP relay process prior to

being forwarded to DHCP server system, DHCP server system is assured that each message of this type will include the correct trusted identifier, the process refers to encoding a trust identifier into the options field of each DHCP message, and the trust identifier is not associated with the DHCP relay agent, and the trust identifier is for identifying the client. Additionally, the object of encoding a trust identifier is to reduce the IP address misuse among the clients of a DHCP server and to prevent attacking the allocation of IP address using a traditional DHCP server, whereas the object of filling in fields associated with the DHCP relay is to make any DHCP messages for response returned from the server to the client pass through the relay.

Secondly, Wong at col. 6, line 7 – col. 7, line 65 discloses that in step 616, the DHCP server system responds to the DHCPDISCOVER message by formulating a DHCOFFER message. In step 618, the router 106 receives the DHCOFFER message and forwards the message to the modem 104 for receipt by client system 102. In step 620, the DHCOFFER message is received by the client system 102. In step 624, the router 106 receives the DHCPREQUEST message and forwards the message to the server. In step 628, the DHCP server system responds to the DHCPREQUEST message by formulating a DHCPACK message. In step 630, the router receives the DHCPACK message. The router 106 extracts the trusted identifier from the vendor-specific information included in the options field of the DHCPACK message, and also extracts the IP address allocated by the DHCP server 114 from the DHCPACK message. The router 106 then forms an association between the extracted trusted identifier and the extracted IP address. In step 632, the router 106 forwards the DHCPACK message to modem 104 for receipt by client system 102. Thus, in Wong, the router only forwards the DHCOFFER message to client system 102, and forwards the DHCPACK message to client system 102. Conversely, as recited in claim 1, the DHCP relay replaces server parameters of fields associated with the DHCP server in the DHCP message for response with relay parameters of the DHCP relay. Wong does not disclose the replacing step in steps 618, 620. Additionally, in claim 1 the DHCP server information is shielded by the relay for the DHCP client through filling in fields associated with the DHCP relay in the DHCP message for request, and the DHCP client information is shielded by the relay

for the DHCP server through replacing server parameters of fields associated with the DHCP server in the DHCP message for response with relay parameters of the DHCP relay.

Thirdly, Wong at col. 7, lines 41-65 discloses that the router 106 extracts a trusted identifier from the vendor-specific information included in the options field of the DHCPDISCOVER message, forms an association table between the trusted identifier and the IP address when receiving DHCPACK message, and **checks the validity of the forwarded data and notifies the maximum quantity of users allowed access according to the association table.** Accordingly, Wong does not describe controlling all the interaction between the DHCP client and the DHCP server, as Wong merely forms the association table through the initial four interactions.

Fourthly, **the router in Wong is located in the network layer, so the router controls common data, whereas the DHCP relay is located in the application layer as recited in claim 1, so the DHCP relay can control DHCP data. The layers applied in Wong and claim 1 are different, so the technical solution is absolutely different.**

Notwithstanding whether the proposed combination of Lim and Wong would have been proper, the combination fails to result in the above-noted features recited in claim 1 for at least the foregoing reasons.

Claims 2-8 depend from claim 1 and are distinguishable from the references for at least the same reasons as claim 1.

Claims 9 and 14 recite features similar to those discussed above with respect to claim 1 and are thus distinguishable from the references for substantially the same reasons as claim 1. Claims 10-13, 15 and 16 each depend from at least one of claims 9 and 14 and are thus distinguishable for at least the same reasons as their respective base claims.

CONCLUSION

All rejections having been fully addressed, Applicants respectfully submit that this application is in condition for immediate allowance and respectfully solicit prompt notification of the same.

Respectfully submitted,

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